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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,882	10/23/2003	Robert M. Japp	END920000150US2	8999

30449 7590 04/01/2005
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EXAMINER
NORDMEYER, PATRICIA L

ART UNIT	PAPER NUMBER
1772	

DATE MAILED: 04/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/691,882	Applicant(s) JAPP ET AL.	
	Examiner Patricia L. Nordmeyer	Art Unit 1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-13,17 and 32-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-13,17 and 32-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/22/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Repeated Rejections

1. The 35 U.S.C. 103 rejection of claims 2 – 5, 10, 17, 32 and 33 over Hatch et al. in view of Weinreich is repeated for reasons previously of record in the paper dated October 12, 2004.
2. The 35 U.S.C. 103 rejection of claims 6 – 9, 12, 13 and 34 – 37 over Hatch et al. in view of Weinreich and further in view of Frater is repeated for reasons previously of record in the paper dated October 12, 2004.
3. The 35 U.S.C. 103 rejection of claim 11 over Hatch et al. in view of Weinreich is repeated for reasons previously of record in the paper dated October 12, 2004.

Response to Arguments

4. Applicant's arguments filed January 7, 2005 with regard to the 35 U.S.C. 103 rejection of claims 2 – 5, 10, 17, 32 and 33 over Hatch et al. in view of Weinreich have been fully considered but they are not persuasive.

In response to Applicant's argument that Hatch does not teach or suggest that the film lubricant effectuates the aforementioned adhesive couplings, the adhesive being removable, that the lubricant adhesively couples the circuit board panels of the stack or the first and second layers to the first and second surfaces of the stack or each intermediate layer to its adjacent stack,

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Hatch teaches that the lubricant is a wax-based material (Column 5, lines 40 – 48) and teaches that exhibits adhesive properties when the lubricate adheres to the substrates is a dry, hardened form (Column 3, lines 55 – 62). As shown in Figure 30, the lubricant is in the form of a sheet which is placed in between the layers of printed circuit boards, thereby adhesively coupling the first and second layers to the first second surfaces of the stack and adjacent stacks. Since the adhesive is a wax material, it is removable by the application of heat.

In response to Applicant's argument that Hatch teaches placing the water soluble dry film lubricant adjacent the panel rather than adhering the panels together, the lubricant of the film adheres the layers together when heat and pressure is applied to the layer of film by the drill going through the material, as the material has to rinsed from the surfaces after the drill has formed the holes (Column 3, lines 44 – 48).

In response to Applicant's argument that the entry board disclosed by Weinreich as resisting burr formation is not a foil or the limitations of claim 5, Weinreich teaches a multilayered entry board material, wherein at least one layer is formed from a foil material (Column 1, lines 45 – 68), specifically a aluminum material (Column 3, lines 15 – 42). The open language of the claims, i.e. "comprising", allows for more layers to present in the material resisting burr formation. Weinreich does contain a foil in combination with a fibrous board or paper.

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5. Applicant's arguments filed January 7, 2005 with regard to the 35 U.S.C. 103 rejection of claims 6 – 9, 12, 13 and 34 – 47 over Hatch et al. in view of Weinreich and further in view of Frater have been fully considered but they are not persuasive.

With regard to the arguments regard Hatch et al. in view of Weinreich, please see the above responses.

6. Applicant's arguments filed January 7, 2005 with regard to the 35 U.S.C. 103 rejection of claim 11 over Hatch et al. in view of Weinreich and further in view of Block have been fully considered but they are not persuasive.

With regard to the arguments regard Hatch et al. in view of Weinreich, please see the above responses.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patricia L. Nordmeyer whose telephone number is (571) 272-1496. The examiner can normally be reached on Mon.-Thurs. from 7:00-4:30 & alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Y. Pyon can be reached on (571) 272-1498. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patricia L. Nordmeyer
Examiner
Art Unit 1772

pln
pln

[Signature]
HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

3/29/05